

REMARKS

Claims 1-5, 7, 23, 25, 26, and 32-34 are currently pending in the subject application and are presently under consideration. Claims 1, 7 and 34 have been amended as shown on pp. 2-5 of the Reply. Claim 32 has been cancelled.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claim 34 Under 35 U.S.C §112

Claim 34 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 34 has been amended. Withdrawal of this rejection is respectfully requested.

II. Rejection of Claims 1-5, 7, 23, 25, 26, and 32-34 Under 35 U.S.C. §103(a)

Claims 1-5, 7, 23, 25, 26, and 32-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dhindsa *et al.* (US 5,740,016) in view of Saika (US 6,573,596) and Morris *et al.* (US 6,230,497). Withdrawal of this rejection is requested for at least the following reasons. Dhindsa *et al.*, Saika or Morris *et al.* alone or in combination does not teach or suggest all elements of the subject claims.

[T]he prior art reference (or references when combined) must teach or suggest all claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants' claimed subject matter relates regulating heat in an integrated circuit device, and in particular to removing generated heat from hot spot areas. To this end independent claims 1, 7 and 34 recite similar features namely: *a heat regulating for regulating a heat flow into and out of an integrated circuit semiconductor body comprising ...a plurality of thermo-electrical structures that create a uniform temperature gradient across an integrated circuit semiconductor body via at least one of heat inducement to or dissipation of generated heat away from a portion of the integrated circuit semiconductor body wherein each of the thermo-electrical structures is*

a composite composed of a layer having at least one part tailored to a heat-generating characteristic of a portion of the integrated circuit semiconductor body ... Dhindsa *et al.*

fails to teach or suggest such claimed aspects.

Dhindsa, *et al.* relates to a solid state temperature controlled substrate support for maintaining a desired temperature distribution across a substrate during processing in semiconductor equipment. Accordingly, it teaches a temperature controlled substrate support included in a semiconductor processing system for processing a substrate. A substrate resting on the substrate support surface is inserted into a processing chamber and processed to produce integrated chips. The substrate support includes a plurality of thermoelectric modules and by controlling the current supply to each of these modules to provide temperature uniformity across the substrate during processing (*See Dhindsa, et al.* col.2 lines 35-55). Thus, Dhindsa, *et al.* relates to maintaining temperature uniformity during production of integrated chips as the substrate support surface bearing the thermo-electric modules is used in the processing chamber.

On page 6 of the Non-Final Office Action dated November 17, 2008, the Examiner argues that Dhindsa *et al.* discloses that a heat regulating device wherein the thermo-electrical structure is a composite, composed of a layer having at least one part tailored to a heat-generating characteristic of a portion of the integrated circuit semiconductor body at col. 3, ll. 55-60 and Figure 1. Applicant's representative respectfully disagrees with such contention. The cited passage relates to the thermoelectric system comprising a plurality of thermoelectric modules. The thermoelectric modules disclosed in Dhindsa *et al.* control the temperature of the electrode *in response to power supplied by a power supply*.

However, the cited passage makes no reference to *wherein each of the thermo-electrical structures is a composite composed of a layer having at least one part tailored to a heat-generating characteristic of a portion of the integrated circuit semiconductor body* as recited in independent claim 1. Each portion of the layer disclosed in the claimed subject matter is formed of a various material that provides *different heat-generating characteristic*. For example, one portion disclosed in the claimed subject matter may be formed of a material that provides relatively high isotropic conductivity and another portion may be formed of a material that provides high thermal conductivity in another direction. Dhindsa *et al.* discloses merely the *thermoelectric modules that are secured to the electrode with bonding material* but fails to disclose or teach *wherein each of the thermo-electrical structures is a composite composed of a*

layer having at least one part tailored to a heat-generating characteristic of a portion of the integrated circuit semiconductor body as recited in independent claim 1.

In view of at least the foregoing, it is respectfully requested that this rejection be withdrawn with respect to independent claims 1, 7, and 34 as well as all claims that depend there from.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [AMD812US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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